

Glyphosate Briefing for Local Government | June 2019

Recommendations:

Gene Ethics recommends that all local councils and other land-management institutions and organisations which spray glyphosate-based-herbicide (GBH) formulations in Australia:

- **Review their policies** on precaution, duty of care, liability and occupational health and safety;
- **Revise policy on the spraying of GBHs** and other synthetic chemicals in all public and private places within its jurisdiction;
- **Prevent any adverse impacts** of weed management chemicals on workers, residents and bystanders;
- **Conduct trials** of the various synthetic-chemical-free weed management systems available, such as weed steaming, goat herds, Bioweed, etc;
- **Consult other councils** trialing or regularly using non-chemical weed management e.g. Yarra, Perth, Dandenong, Stirling, Bassendean and Fremantle councils;
- **Phase out GBH and other synthetic chemicals**, particularly where vulnerable children, pets or environments may be exposed - parks, schools, childcare centres, playgrounds and “soft fall” areas, footpaths and trails, sports fields, community gardens, and aquatic environments.

Background:

Glyphosate is the 'active' ingredient in the GBH formulations marketed under many brand names including Monsanto's Roundup, the most common. The US National Pesticide Information Centre at Oregon State University's glyphosate technical factsheet is helpful.ⁱ

Monsanto patented and registered glyphosate as a weed killer in 1974 and safety assessments and registrations rely heavily on corporate studies conducted over 30 years ago. But “analytical chemistry has progressively become more inclusive of biological questions.”ⁱⁱ

Governments at every level and other institutions globally are reviewing glyphosate use and its impacts as a result of its reclassification as a probably human carcinogen, publication of new evidence of health and other impacts, disclosure of Monsanto's disinformation tactics, and large US court judgements against the company.

We encourage all GBH users to apply the precautionary principle and to conduct their own reviews of their weed management processes, practices and protocols. As a result of such assessments, GBH spraying is already banned or restricted in many places globally and this trend will continue.ⁱⁱⁱ

Evidence of GBH harm

Court cases that have accepted GBHs cause Non-Hodgkin's Lymphoma are just part of the chemical's story of harm. Studies find that glyphosate harms earth worms,^{iv} pollutes water, remains in soil far longer than claimed, routinely taints human food supplies and that 'safe' limits set for human ingestion are based on long-outdated science and testing.^v Glyphosate may induce malformations in animal embryos^{vi} and can cause epigenetic disease in mammals several generations after initial exposure.^{vii}

A British Medical Journal report asserts, “current safety standards for GBHs are outdated and may fail to protect public health or the environment.” It proposes that, “To improve safety standards, the following are urgently needed: (1) human biomonitoring for glyphosate and its metabolites; (2) prioritisation of glyphosate and GBHs for hazard assessments, including toxicological studies that use state-of-the-art approaches; (3) epidemiological studies, especially of occupationally exposed agricultural workers, pregnant women and their children and (4) evaluations of GBHs in commercially used formulations, recognising that herbicide mixtures likely have effects that are not predicted by studying glyphosate alone.”^{viii}

The US Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, issued a draft Toxicological Profile for Glyphosate in April 2019, for public comment. It summarises the published impacts of orally administered GBH experiments on laboratory animals as having various toxic effects on: body weight, blood, liver, and renal systems.^{ix}

Washington State University (WSU) researchers found various diseases and other health problems in the second- and third-generation offspring of rats exposed to glyphosate. They found the descendants of exposed rats develop prostate, kidney and ovarian diseases, obesity and birth abnormalities.^x

The World Health Organisation's expert cancer committee - the International Agency for Research on Cancer (IARC) – is seventeen independent experts without vested interests. In March 2015, they upgraded the status of glyphosate from a 2B (possible) to 2A (probably carcinogenic to humans).^{xi} The basis for the change was the systematic assembly and review of all publicly available and pertinent studies (about 1,000 reports) of people exposed at work, and of cancer and cancer-related effects found in experiments.

The IARC found, “limited evidence” in humans but, “sufficient evidence” in animals that glyphosate and GBHs are genotoxic and capable of inducing oxidative stress. “Oxidative stress can be responsible ... in the onset and/or progression of several diseases (i.e. cancer, diabetes, metabolic disorders, atherosclerosis, and cardiovascular diseases).”^{xii} They also found “strong” evidence of genotoxicity both for “pure” glyphosate and for glyphosate formulations.^{xiii}

Monsanto mounted a huge disinformation campaign, trying to discredit IARC committee members and their conclusions, but by 2017 Monsanto's strategies to obfuscate and hide the truth had been uncovered and reported,^{xiv} including its “dark money project” that aimed to win favourable public opinion and hide glyphosate's hazards was disclosed.^{xv}

This is just a small sample of the published independent evidence of the multiple health and environmental harms that GBH spraying and exposure cause in animals, humans and the environment.

Regulatory affairs:

The Australian Pesticides and Veterinary Medicines Authority (APVMA) also still rejects IARC and other findings of harm, claiming that although Roundup is hazardous it is safe to use provided the label instructions are followed. But the labels on Roundup are deficient. In vanishingly small print they focus first on protecting non-target plants and advise little about safe use except washing hands, waiting for the chemical to dry in treated areas, and avoiding food contamination. Potential health impacts, the need for extreme care, and using personal protection equipment are absent.

Our regulator advises us that, “In 2016, following the IARC assessment, the APVMA considered glyphosate and found no grounds to place it under formal reconsideration again. The APVMA completed a review of glyphosate in 1997, which set Australia's health based guidance values at a level that remains protective.”^{xvi} That review certainly used data that is now long out-of-date.

And though the APVMA has registered over 500 GBH formulations it, “does not monitor or enforce the correct use of agricultural and veterinary chemicals once they are registered. The correct use of agricultural and veterinary chemicals is first-and-foremost the user's responsibility.”^{xvii} Thus, it may also be construed that users are liable for any harm suffered.

The APVMA has over 11,000 chemicals and veterinary medicines registered. GBHs are just some of the huge number of industrial and consumer chemical products that have harmed human and animal health, and the environment, over many years. Some notable other such substances are asbestos, tobacco, lead in petrol, 2,4,5-T (dioxins), PCBs, Vioxx, talcum powder, and phthalates.^{xviii}

In all these cases, the companies producing and peddling the harmful products knew they had deleterious impacts long before the victims or public were informed. Glyphosate is a repeat.

But since the scientific evidence on glyphosate is contested, some scientists say more research and reviews are needed as, “there is a too great a discrepancy between the opinions of the various scientific institutions, mainly because of their different economic and social interests.”^{xix}

Corporate influence:

Corporate profits and political commitments, as well as data, are at the centre of the global glyphosate controversy. Australian land managers spent over \$1.7 billion in 2017/18 on herbicides, including the most used, GBHs. The APVMA’s operating budget substantially relies on levies that chemical companies pay, based on the volume of each pesticide and veterinary medicine sold in Australia. Herbicides are the top earner for the APVMA.^{xx}

The international peak GM crop seed and chemical industry lobby group CropLife, with a network that represents its member companies in 91 countries,^{xxi} has the APVMA and politicians captive.

CropLife Australia’s CEO Matthew Cossey^{xxii} is a former senior official and campaign director for the ALP. In the 2017/18 financial year CropLife donated \$34,271 to the Australian Labor Party and \$22,300 to the Coalition.^{xxiii} In the same year, the GM crop and chemical company Bayer, which now owns Monsanto, donated \$40,600 to Labor and \$42,540 to the Coalition.^{xxiv}

CropLife had earlier influenced cancellation of a farm chemical review scheme, set to start on July 1, 2014, when Barnaby Joyce became Agriculture Minister after the 2013 election. His election promise to the agrichemical industry was delivered when the Agricultural and Veterinary Chemicals Legislation Amendment (Removing Re-approval and Re-registration) Act 2014^{xxv} cancelled the new scheme. It was dumped with ALP support before it even got started.^{xxvi} That year, CropLife donated to both the Nationals (\$42,500) and Labor (\$22,300).^{xxvii}

Under the scheme, the safety and efficacy of all agricultural chemicals were to be reviewed every fifteen years, as they are in the USA, Canada and in Europe (each decade). Registrants would be required to submit state of the art data on the toxicity and efficacy of thousands of ‘active’ farm chemicals, including GBHs. Many of these toxics were registered up to 50 years ago on the basis of deficient, registrant-generated test data and have never been officially reviewed.

Liability and insurance for GBH harm

Institutions making, supplying or using GBHs may be unable to buy insurance to cover for these dealings and may also be liable for their adverse impacts.

The NSW councils’ insurer StateCover was prompted to call in 2015 for risk assessment reviews after the IARC report was published. It warned the state’s local governments to take a ‘cautious approach’ to GBH use.^{xxviii}

Australian-based agribusiness Nufarm makes and supplies several GBH formulations. It recently warned the Australian Stock Exchange (ASX) of its greatly increased risk of litigation over glyphosate exposure and illness.^{xxix} The company also cautioned ASX that the intense legal and public pressure on glyphosate could impact future sales of the herbicide, as well as the maintenance of essential product registrations for the product around the world.^{xxx}

Jack Harrell, Jr. CEO of Harrell’s agrichemical distributors in the USA wrote an open letter to customers in February 2019 saying: “we were surprised to learn that our insurance company was no longer willing to provide coverage for claims related to glyphosate due to the recent high-profile

lawsuit and the many thousands of lawsuits since. We sought coverage from other companies but could not buy adequate coverage for the risk we would be incurring. So we had no choice other than to notify our Harrell's Team and customers that we would no longer offer products containing glyphosate as of March 1, 2019."^{xxxii}

Praedical^{xxxiii} risk assessors estimate that realistically the cost of glyphosate claims in the USA alone may be \$30.9 billion. But, they write, "We don't think lymphoma is the greatest risk [of insurance costs] for glyphosate," as recent scientific literature suggests the herbicide might also be a risk factor for coronary artery disease.^{xxxiii xxxiv} They say that as researchers look for more links between GBHs and bodily injury, the likelihood of more diverse litigation increases.^{xxxv}

Litigation for GBH harm

The US state of California now allows some cases to be expedited where plaintiffs are terminally ill. Three jury trials against Monsanto, over GBH exposure triggering the cancer non-Hodgkin's Lymphoma (NHL) were expedited, and found for the four plaintiffs – Johnson, Hardeman and Pilliod (a couple both suffering NHL)^{xxxvi} The courts made awards in their favour of \$78.5 million, \$80 million and \$2.05 billion respectively. The amount of the awards - but not the judgements themselves - will go to appeal.

The judge in these three cases has now appointed prominent attorney Kenneth Feinberg as mediator for court-mandated settlement talks between Bayer/Monsanto and the 900 plaintiffs with cases before his court.^{xxxvii} The next case is scheduled to be heard in Monsanto's hometown, St. Louis Missouri, in August. There are 13,400 US plaintiffs in all.

Meanwhile in Australia, "The APVMA's approval of the substance (glyphosate) is not a bar to litigation and there is a possibility of claims, including possible class actions, based on similar premises to the ongoing US litigation being brought in Australian courts, with test cases possible either relating to direct use or downstream impacts."^{xxxviii}

Writs for the first Australian court case linking NHL with exposure to Roundup weedkiller have been filed in a Victorian court and class actions are also planned.^{xxxix} The first plaintiff is a Melbourne gardener, Michael Ogalirolo, 54, who was diagnosed in 2011 with NHL after more than 18 years of exposure to glyphosate.^{xl} He claims Monsanto failed to adequately warn him that Roundup was dangerous and could cause serious injuries, loss and damage.^{xli}

To follow the progress of US GBH litigation you may visit: Attorneys Baum Hedlund Law,^{xlii} US Right To Know Trial Tracker,^{xliii} and Roundup Products Liability Litigation News.^{xliv}

Roundup-free jurisdictions and products

GBH spraying is already banned or restricted in many countries, regions and localities around the world. Chemical manufacturers, suppliers, retailers and users are also considering their options and many are choosing GBH-free. The US lawyers representing successful plaintiffs have a moderately up to date list on their website.^{xlv}

Around Australia, many local government bodies and other users are reviewing, testing and contracting non-chemical weed management systems or modifying their spraying regimes. For instance, Sydney's Fairfield City phased out Roundup but Georges River replaced it with another weed killer. Eight other Sydney councils, including Willoughby, Ku-ring-gai, Sutherland Shire and Waverley are doing reviews, while eighteen others, including InnerWest, Lane Cove and Mosman, still use Roundup claiming to follow the advice of our national pesticides regulator the APVMA.^{xlvi}

Unsurprisingly Vietnam, Australia's fourth largest grain market is risk averse to chemical impacts. It's still the case that many Vietnamese newborns suffer malformations from dioxin-contaminated Agent Orange herbicide, sprayed over their country in the US-led war. So Vietnam has banned importation and use of all GBHs from 2020. Australian GrainGrowers' chairman Brett Hosking, nervous that Australian grain exports will be rejected if GBH residues are detected, denies other countries are banning GBHs.^{xlvii}

Recognising that market and community sentiments are running against the use of synthetic chemicals, Co-operative Bulk Handlers (CBH) in WA now require farmers to report pre-harvest spraying of glyphosate on barley. The malting barley segregation must not be sprayed at all, and CBH suppliers will in future be questioned on which chemicals they spray on all their crops.^{xlviii}

The city of Miami USA has banned CBHs^{xlix}, Pike Nurseries is selling down Roundup stocks in its fifteen Atlanta and two Charlotte storesⁱ, and the University of California has stopped using GBHs on all ten campuses which teach over 200,000 students.ⁱⁱ

These are just a few of the myriad responses to the GBH judgements and awards in the USA, the emerging evidence of harm, and a torrent of media coverage.

Chem-free weed management options

Affordable, non-chemical weed management systems can replace toxic municipal weed killer and insecticide use. We should all welcome and embrace safer and more sustainable options.

Our estimate is that over fifty of Australia's 547 local councils are now reconsidering their weed control practices. The WA Local Governance Association held a Weed Management Event in February 2019 and their informative materials are available.ⁱⁱⁱ

Weedsteaming is suited to all locations in municipalities, farms, roadsides, riverbanks, etc.^{liii} Full searchable listings of various steam weed control companies^{liv} across Australia^{lv} are here.^{lvi} Though steaming may be slightly more time consuming and therefore expensive than spraying GBHs, the indirect costs of health and environment damage and liability appear to make it competitive in a wide variety of situations.^{lvii}

Some municipalities might consider using grazing goatherds for weed control.^{lviii} EastLink in Melbourne has trialled this strategy with success and will continue with the practice.^{lix} Knox Council is also using goats to weed reserves in Ferntree Gully according to a Herald Sun (paywall) report of January 19, 2019. Colin Arnold of Graze Away provides and cares for these Melbourne-based herds of goats. Goats are also available for land management on the South Coast of NSW.^{lx}

The active ingredients in Bioweed, a safe organic weed control spray that also kills weed seeds, are sourced from sustainably farmed pine trees.^{lxi}

Doubtless many more weed management options already exist. Public Research & Development funds should be invested in developing and deploying more.

Conclusion

The precautionary response to uncertainties over GBH spraying is for all councils to adopt and action our recommendations. In the long run this will prove to be the most prudent approach to minimising and resolving the risks to council integrity.

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